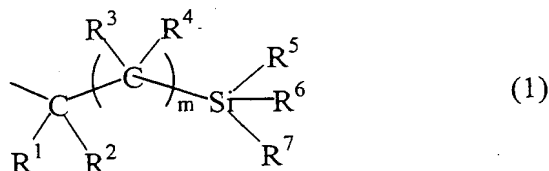


The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A polymer having silicon-containing groups of ~~the general~~ formula (1):



wherein

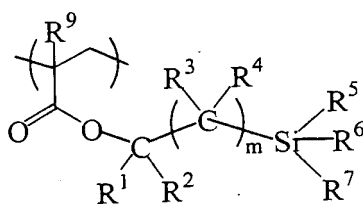
one of R¹ and R² is a ~~to R⁴ each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms~~ and the other is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or R¹ and R², taken together, may form an aliphatic hydrocarbon ring in which -CH₂- may be substituted with a -Si(R⁸)₂- group, and R³ and R⁴ each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atom, or R³ and R⁴, taken together, may form an aliphatic hydrocarbon ring in which -CH₂- may be substituted with a -Si(R⁸)₂- group,

R⁵ to R⁷ each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or aryl group of 6 to 20 carbon atoms,

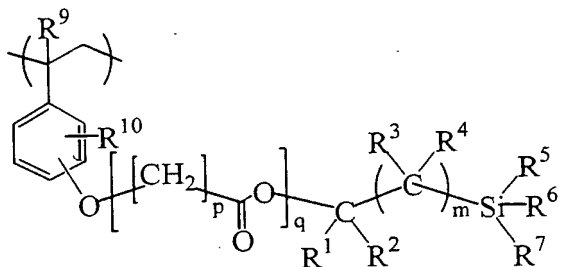
R⁸ is independently a straight or branched alkyl group of 1 to 4 carbon atoms, and m is 1 or 2.

2. (Amended) A ~~The~~ polymer of claim 1, wherein said polymer contains carboxylic acid, alcohol, or phenol groups or combinations thereof, and hydrogen atoms of hydroxyl groups on at least on one of said a carboxylic acid, alcohol or phenol groups is ~~are~~ substituted with the silicon-containing group ~~groups of the general~~ formula (1).

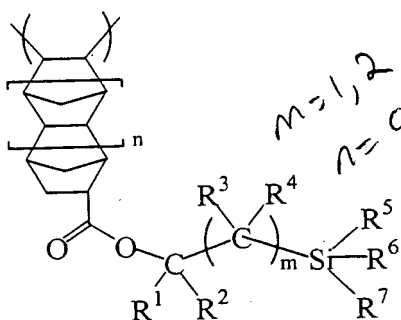
3. (Amended) A polymer comprising recurring units of one of the general formulae (2) to (5):



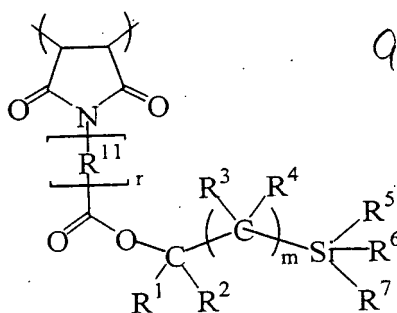
(2)



(3)



(4)



(5)

wherein

one of R^1 and R^2 is a α -alkyl group and the other is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms and the other is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or R^1 and R^2 , taken together, may form an aliphatic hydrocarbon ring in which $-\text{CH}_2-$ may be substituted with a $-\text{Si}(\text{R}^8)_2-$ group, and R^3 and R^4 each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atom, or R^3 and R^4 , taken together, may form an aliphatic hydrocarbon ring in which $-\text{CH}_2-$ may be substituted with a $-\text{Si}(\text{R}^8)_2-$ group,

R^5 to R^7 each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or aryl group of 6 to 20 carbon atoms,

R^8 is independently a straight or branched alkyl group of 1 to 4 carbon atoms,

R^9 is hydrogen, a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or $\text{CH}_2\text{CO}_2\text{R}^{12}$,

R^{10} is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms,

a1
R¹¹ is a straight, branched or cyclic alkylene group of 1 to 10 carbon atoms,
R¹² is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms,
m is 1 or 2, n is a number of 0 to 5, p is a number of 1 to 5, each of q and r is 0 or 1.

4. (Original) A chemically amplified positive resist composition comprising:
(A) the polymer of claim 1,
(B) a photoacid generator, and
(C) an organic solvent.
5. (Original) The resist composition of claim 4 further comprising a basic compound.
6. (Original) A chemically amplified positive resist composition comprising:
(A) the polymer of claim 1,
(B) a photoacid generator,
(C) an organic solvent, and
(D) a dissolution rate inhibitor having an acid labile group.
7. (Original) The resist composition of claim 6 further comprising a basic compound.
-

8. (Amended) A process for forming a pattern, comprising ~~the steps of:~~
applying ~~a~~ the positive resist composition of claim 4 onto an organic film on a
substrate to form a coating,
prebaking the coating to form a resist film,
exposing the resist film in a pattern circuit region to radiation,
post-exposure baking the resist film,
developing the resist film with an aqueous alkaline solution to dissolve away the
exposed area, thereby forming a resist pattern, and
processing the organic film with an oxygen plasma generated by a dry etching
apparatus.
-

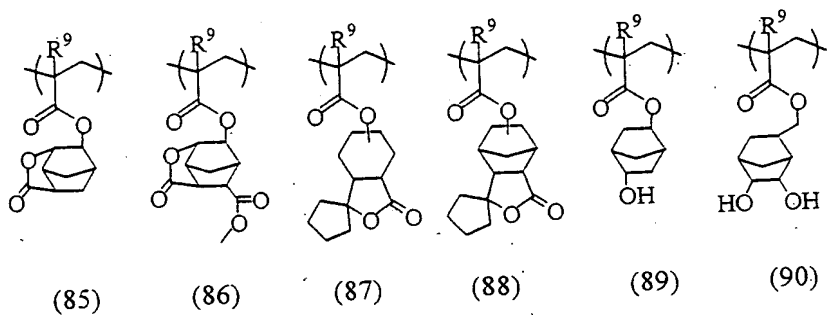
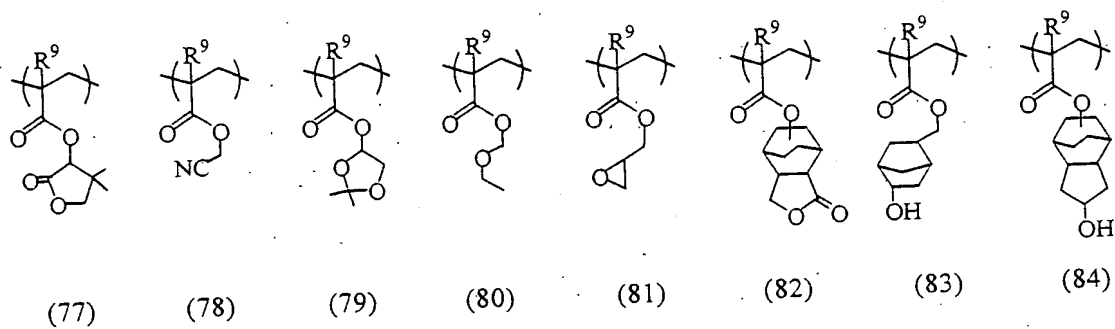
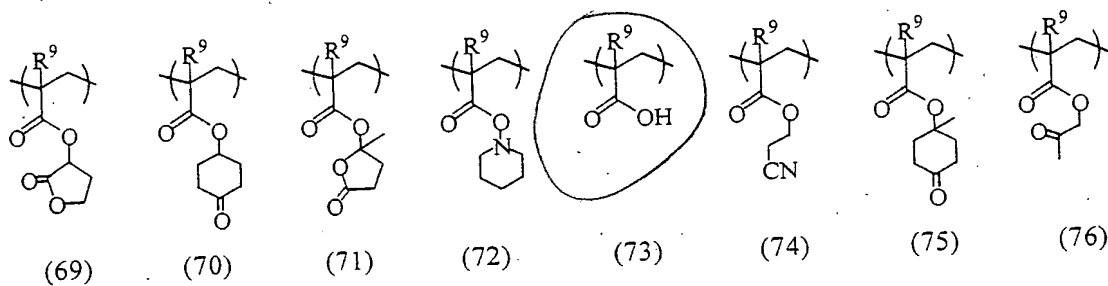
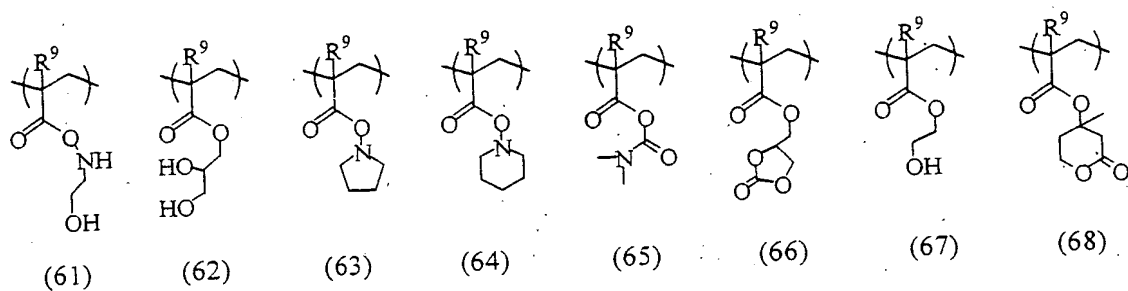
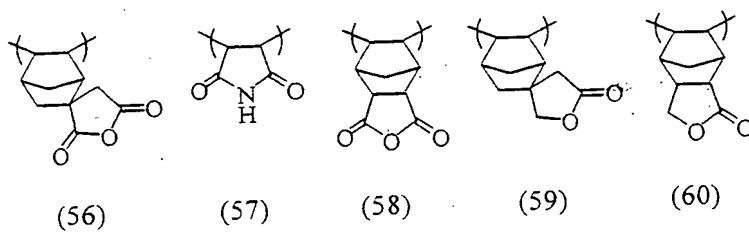
- a3
9. (New) A chemically amplified positive resist composition comprising:
(A) the polymer of claim 3,

- 

- $$\begin{array}{c} \text{R}^3 \quad \text{R}^4 \\ \diagup \quad \diagdown \\ \text{---C---}(\text{C})_m\text{---Si---} \\ \diagdown \quad \diagup \quad \diagdown \quad \diagup \\ \text{R}^1 \quad \text{R}^2 \quad \text{R}^5 \quad \text{R}^6 \\ \quad \quad \quad \quad \quad \diagdown \quad \diagup \\ \quad \quad \quad \quad \quad \text{R}^7 \end{array} \quad (1)$$

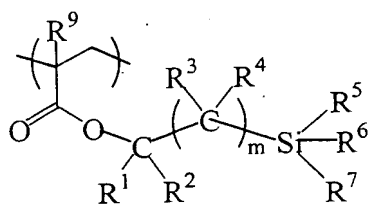
R⁵ to R⁷ each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or an aryl group of 6 to 20 carbon atoms,

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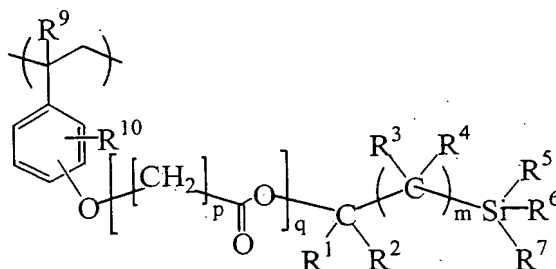


wherein R^9 is hydrogen, a straight, branched or cyclic C_{1-20} alkyl group, or $CH_2CO_2R^{12}$, and R^{12} is hydrogen or a straight, branched or cyclic C_{1-20} alkyl group.

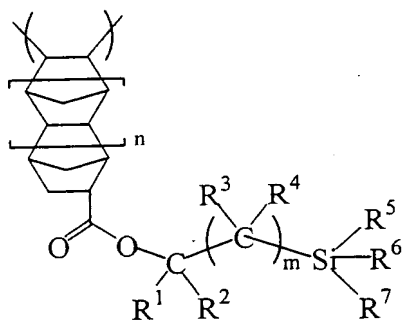
14. (New) A polymer comprising recurring units of one of formula (2) to (5) and recurring units of (56) to (90):



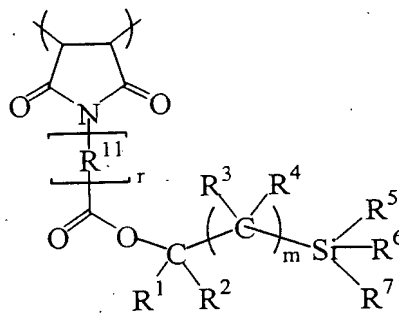
(2)



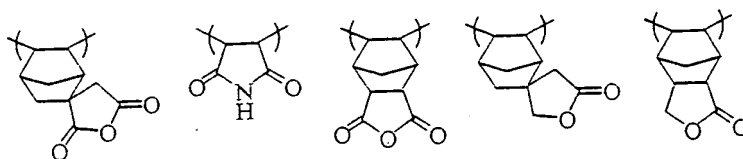
(3)



(4)



(5)



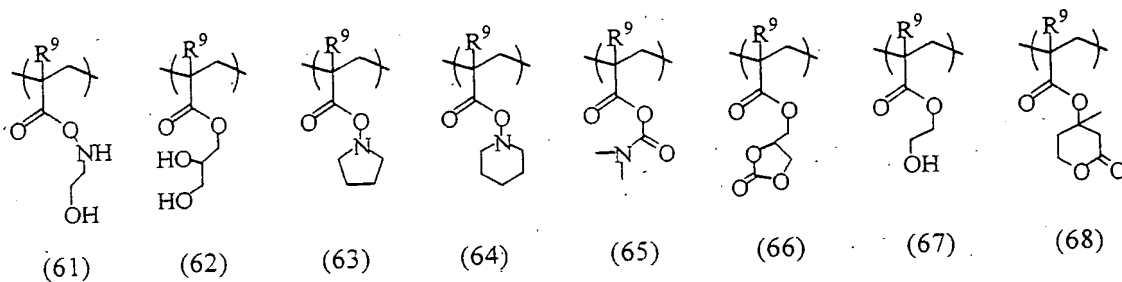
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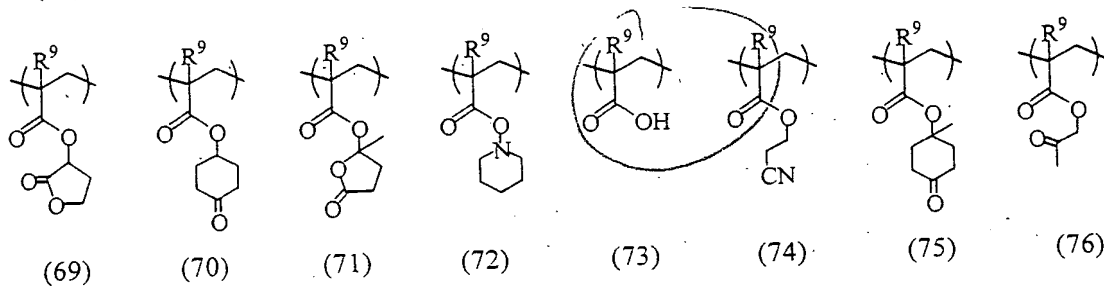
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(71)

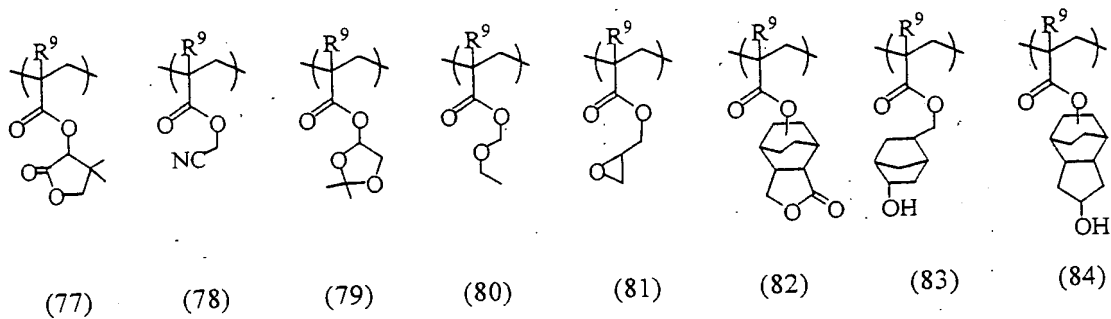
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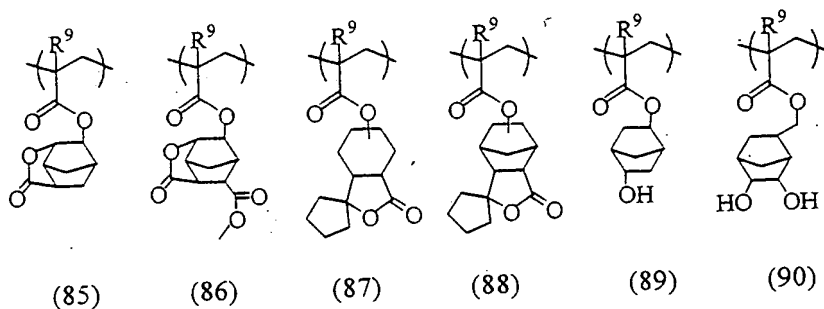
(80)

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(85)

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(89)

(90)

wherein

R^1 to R^4 each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or R^1 and R^2 , taken together, optionally form an aliphatic

hydrocarbon ring in which $-\text{CH}_2-$ is optionally substituted by $-\text{Si}(\text{R}^8)_2-$ group, and R^3 and R^4 , taken together, optionally form an aliphatic hydrocarbon ring in which $-\text{CH}_2-$ is optionally substituted by $-\text{Si}(\text{R}^8)_2-$,

R^5 to R^7 each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or an aryl group of 6 to 20 carbon atoms,

R^8 is independently a straight or branched alkyl group of 1 to 4 carbon atoms,

R^9 is hydrogen, a straight, branched or cyclic C_{1-20} alkyl group, or $\text{CH}_2\text{CO}_2\text{R}^{12}$,

R^{10} is hydrogen or a straight, branched or cyclic C_{1-20} alkyl group,

R^{11} is a straight, branched or cyclic C_{1-10} alkylene group,

R^{12} is hydrogen or a straight, branched or cyclic C_{1-20} alkyl group,

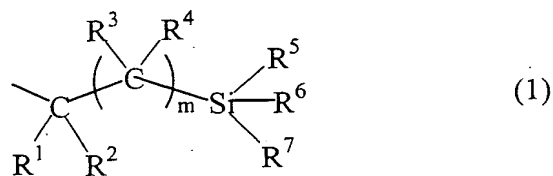
m is 1 or 2,

n is a number of 0 to 5,

p is a number of 1 to 5, and

each of q and r is 0 or 1.

15. (New) A chemically amplified positive resist composition comprising:
- (A) the polymer of claim 14,
 - (B) a photoacid generator, and
 - (C) an organic solvent.
16. (New) A resist composition of claim 15, further comprising a basic compound.
17. (New) A chemically amplified positive resist composition comprising:
- (A) the polymer of claim 14,
 - (B) a photoacid generator,
 - (C) an organic solvent, and
 - (D) a dissolution rate inhibitor having an acid labile group.
18. (New) A resist composition of claim 17, further comprising a basic compound.
19. (New) A monomer having silicon-containing groups of formula (1):

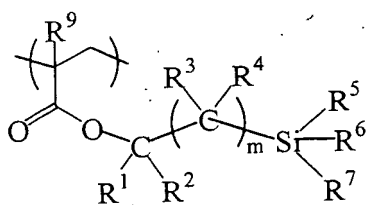


wherein R¹ to R⁴ each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or R¹ and R², taken together, optionally form an aliphatic hydrocarbon ring in which -CH₂- is optionally substituted by -Si(R⁸)₂- group, and R³ and R⁴, taken together, optionally form an aliphatic hydrocarbon ring in which -CH₂- is optionally substituted by -Si(R⁸)₂-,

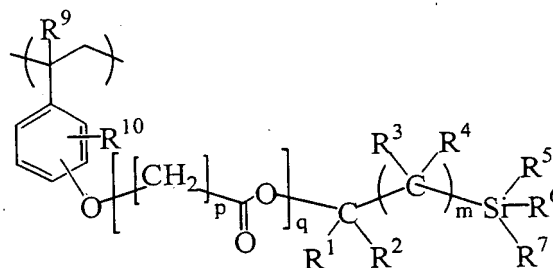
R⁵ to R⁷ each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or an aryl group of 6 to 20 carbon atoms,

R⁸ is independently a straight or branched alkyl group of 1 to 4 carbon atoms, and m is 1 or 2.

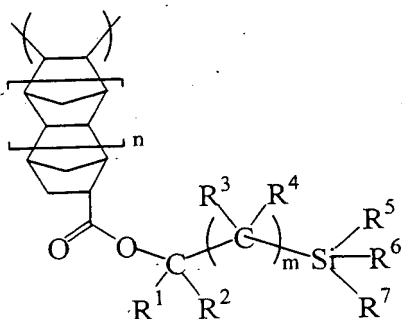
20. (New) A monomer capable of forming units of one of formulae (2) to (5):



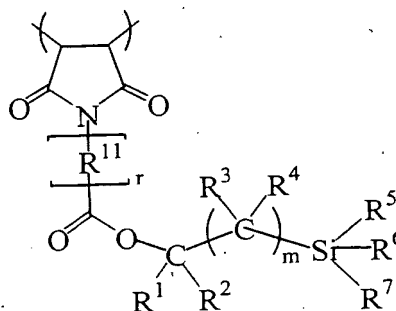
(2)



(3)



(4)



(5)

wherein

R^1 to R^4 each are independently hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or R^1 and R^2 , taken together, may form an aliphatic hydrocarbon ring in which $-CH_2-$ may be substituted with a

$-Si(R^8)_2-$ group, and R^3 and R^4 , taken together, may form an aliphatic hydrocarbon ring in which $-CH_2-$ may be substituted with a $-Si(R^8)_2-$ group,

R^5 to R^7 each are independently a straight, branched or cyclic alkyl or fluorinated alkyl group of 1 to 20 carbon atoms or aryl group of 6 to 20 carbon atoms,

R^8 is independently a straight or branched alkyl group of 1 to 4 carbon atoms,

R^9 is hydrogen, a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms, or $CH_2CO_2R^{12}$,

R^{10} is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms,

a30
R¹¹ is a straight, branched or cyclic alkylene group of 1 to 10 carbon atoms,

R¹² is hydrogen or a straight, branched or cyclic alkyl group of 1 to 20 carbon atoms,

m is 1 or 2, n is a number of 0 to 5, p is a number of 1 to 5, each of q and r is 0 or 1.
